



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

PATENT

In re application of: Ni *et al.*

Application No.: 09/347,583

Filed: June 30, 1999

Title: MOVEABLE BARRIER FOR MULTIPLE ETCH
PROCESSES

Attorney Docket No.:
LAM1P111/P0513

Examiner: C. Brown

Group: 1765

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Deborah Neill

RESPONSE C

Assistant Commissioner for Patents
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Washington, D.C. 20231

Sir:

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This reply and the enclosed remarks are submitted in response to the non-final
Office Action mailed on October 19, 2001. Applicants submit that the attached
remarks fully address the issues raised in the Office Action.

REMARKS

Claims 1-13 have been rejected by the Examiner. Claims 1-13 are pending in
this Application. Applicants respectfully request reconsideration of the rejections set
forth in the Office Action dated October 19, 2001 in view of the following remarks.

The present invention relates to a diffusion barrier that can be positioned in
multiple positions relative to a wafer. One known approach for improving etch rate
uniformity in a chemically driven etch process is to install a diffusion barrier around
the wafer perimeter. However, diffusion barriers are not used during ion-assisted (or
ion-driven) etch processes (e.g. a plasma enhanced etch process). More specifically,
the diffusion barrier is believed to quench the plasma and thus disturb the ion density
uniformity in the plasma. If the barrier were to be used, the plasma density near the